REMARKS

Status of the Application

Claims 1-22 are all the claims pending in the application. Claims 7-8 and 18-19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lin (U.S. 6,658,354) in view of T.L. Wilson (U.S. 3,545,266). Claims 9 and 20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lin and T.L. Wilson as applied to claim 8 above, and further in view of Chowdhary (U.S. Patent No. 6,282,496). Claims 1-6 and 12-17 are allowed. Claims 10-11, 21 and 22 are objected to as being dependent on a rejected base claim.

Preliminary Matters

Applicants thank the Examiner for acknowledging Applicants' claim to foreign priority under 35 U.S.C. § 119 and receipt of the certified copy of the priority document.

Applicants respectfully request that the Examiner indicate acceptance of the drawings filed March 17, 2004.

Allowable Subject Matter

Applicants thank the Examiner for indicating that claims 1-6 and 12-17 are allowable.

Applicants further thank the Examiner for indicating that claims 10-11 and 21-22 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants respectfully request that the rewriting of claims 10-11 and 21-22 in abeyance until the Examiner has reconsidered the prior art rejections of the other claims.

Claim Rejections - 35 U.S.C. § 103

Claims 7-8 and 18-19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lin (U.S. Patent No. 6,658,354) in view of T.L. Wilson (U.S. Patent No. 3,545,266).

Claim 7 recites, "acceleration sensors for outputting motion acceleration information" and "a rotation angle information estimation-computing portion for estimating motion rotation angle information based ... the outputted motion acceleration information." The Examiner alleges that Lin discloses acceleration sensors for outputting motion acceleration information, citing col. 16, lines 8-23 of Lin. The Examiner acknowledges that Lin fails to teach or suggest the remaining elements of claim 7, but cites Wilson as teaching the remaining elements of claim 7, citing col. 1, line 28 - col. 2, line 56, col. 3, lines 26-47, col. 5, line 31- col. 6, line 19, col. 11, line 57 - col. 13, line 7, col. 18, line 47 - col. 19, line 43, col. 8, line 73 - col. 9, line 34, col. 9, line 73 - col. 11, line 20 and col. 23, lines 1-53 for support. Applicants respectfully disagree with the Examiner's position.

Lin teaches an interruption free navigator which includes an inertial measurement unit. However, in determining the positioning, Lin teaches that velocity sensors and digital angular increments are used to measure the velocity of a hand held device, and that the velocities are then integrated in order to *calculate* the acceleration in each of the respective direction. See col. 15, lines 35-41 and col. 16, lines 9-14. Therefore, Lin fails to teach or suggest the use of acceleration sensors as recited in claim 1.

Wilson, on the other hand, teaches a noninertial strapped down gravity gradient navigation system. Wilson uses differential inertial sensors and rotational inertial sensors to

measure motion in the presence of unknown gravitational acceleration effects. However, because Wilson teaches the use of rotational inertial sensors, Wilson cannot teach or suggest a rotational angle information estimation-computing portion for estimating motion rotation angle information based on outputted motion acceleration information. Wilson teaches that rotational angle information is measured, and used to determine motion. See col. 11, lines 57-59 and col. 13, lines 47-53. Further, col. 11, lines 57-59 of Wilson requires a sensing means for sensing angular velocity, which is intended to be replaced by the claimed rotation angle information estimation-computing portion. Therefore, Wilson cannot teach or suggest a rotation angle information *estimation-computing* portion.

Additionally, Wilson fails to teach or suggest an optimal plane-computing unit, as claimed in claim 1, because the motion position information in Wilson is not projected onto an optimal plane as required by claim 1.

For the reasons listed above, the combination of Lin and Wilson fails to teach or suggest all of the elements of claim 7, and claim 7 is patentable over the applied art. Claim 8 is patentable by virtue of its dependency from claim 7.

Claim 18 recites similar limitations to claim 7, and is patentable for reasons analogous to those presented with respect to claim 7. Claim 19 is patentable at least by virtue of its dependency from claim 18.

Claims 9 and 20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lin and T.L. Wilson as applied to claim 8 above, and further in view of Chowdhary (U.S. Patent No. 6,282,496).

Claims 9 and 20 are dependent from claims 7 and 18, respectively. Because Lin and Wilson fail to teach or suggest all of the elements of claims 7 and 18, and because Chowdhary fails to cure the defects noted with respect to claims 7 and 18, claims 9 and 20 are patentable at least by virtue of their respective dependencies.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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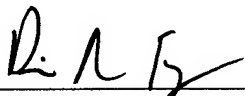
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